The text file Wine.csv contains the Price (in dollars) of 50 wine bottles in different distilleries along with the Age of the wine in years and the Alcohol %. Answer the following:

1. How is Age of Wine and Alcohol % affecting Price?

2. Using a first order multiple regression model to the data and answer the following:

    A. Is the model useful?

    B. Given the age of wine, by what amount can one expect the price to go up for an increase in Alcohol of 1%?

    C. The distillery has acquired several Wine bottles each 125 years old paying an average price of $1000 per bottle. From past experience it has been found that such wine typically contain 10-13% Alcohol. What can be said about its expected profit per bottle with 95% confidence?

    D. You find a wine bottle in the distillery that is 120 years old and find that it contains 15% Alcohol. What is the minimum amount you should be willing to pay so that you are 97% percent certain to buy the bottle?

    E. In presence of the other, which of the two factors, Age of the bottle or Alcohol content, is more important in determining the selling price of a wine bottle?

3. Is there merit in trying higher order multiple regression models? Does the model fit improve?

The answers can be compiled and sent as a Word file with supporting plots and statistics wherever necessary. Kindly answer to the point and keep it brief. Summary in bullet points will be appreciated.